## AMENDMENTS

Please amend the subject application as set forth below.

In the Claims

Amend claim 97 and add new claims 117 and 118 as set forth below. A complete listing of all the claims as amended of the relevant application is set out below; treating, for purposes of 37 CFR 1.121(c), the continued prosecution application (CPA) filed on 5 April 2002 and its immediate parent application which was filed on 5 June 1995 as a single application.

Claims 1 – 96 (cancelled).

97. (currently amended) A reagent kit for detecting the presence or absence of one or more specific nucleotides at a predetermined target position in a target nucleic-acid polymer, comprising:

(a) a detection primer comprising a detection-primer nucleotide sequence having a primer-extension-initiation 3'-end nucleotide which constitutes a 3' terminal end of the detection primer, the detection-primer nucleotide sequence being complementary to a primer-hybridizing nucleotide sequence of the target nucleic-acid polymer with a nucleotide in the target nucleic-acid polymer complementary to the primer-extension-initiation 3'-end nucleotide of the detection-primer nucleotide sequence defining a primer-end complement nucleotide, the primer-hybridizing nucleotide sequence of the target nucleic-acid polymer extending towards the 3' end of the target polymer from the primer-end complement nucleotide, the primer-end complement nucleotide being located in the target polymer at a position 3'-ward of the predetermined target position, the position of the primer-end complement nucleotide being subject to a constraint that no

nucleotide of the same type as the one or more specific nucleotides to be detected be located in the target polymer in any position between the position of the primer-end complement nucleotide and the predetermined target position;

(b) an enzymatic polymerizing agent; and

(c) an admixture of nucleoside triphosphates including at least one deoxynucleotide and at least two different chain-terminating nucleotide analogues, at least one deoxynucleotide comprising a detectable label or an attachment moiety capable of binding a detectable label,

so that in use the detection primer can hybridize to the target nucleic-acid polymer at the primer-hybridizing nucleotide sequence and form a detection-primer extension product by an enzyme-catalyzed primer-extension reaction to permit the presence or absence of a specific nucleotide at the predetermined target position to be detected by detecting the presence or absence of a corresponding detectable label in association with the detection-primer extension product.

98. (previously presented) A reagent kit according to claim 97 wherein the detection primer comprises an attachment moiety.

99. (previously presented) A reagent kit according to claim 97 wherein the detection-primer nucleotide sequence is from 10 to 40 nucleotides in length.

100. (previously presented) A reagent kit according to claim 97 wherein each chain-terminating nucleotide analogue of the nucleoside triphosphates of paragraph (c) is a dideoxyribonucleotide selected from the group consisting of ddATP, ddGTP, ddCTP, and ddTTP.

101. (previously presented) A reagent kit according to claim 97 wherein the nucleoside triphosphates of paragraph (c) include at least two deoxynucleotides, at least one of which

deoxynucleotide comprises a detectable label or an attachment moiety capable of binding a detectable label.

102. (previously presented) A reagent kit according to claim 97 wherein each deoxynucleotide of the nucleoside triphosphates of paragraph (c) is a deoxyribonucleoside triphosphate selected from the group consisting of dATP, dGTP, dCTP, dUTP, and dTTP.

103. (previously presented) A reagent kit according to claim 97 in which the primer-end complement nucleotide is located in the target nucleic-acid polymer at a position immediately adjacent to the predetermined target position.

104. (previously presented) A reagent kit according to claim 97 in which the detectable label is a radioisotope.

105. (previously presented) A reagent kit according to claim 97 further comprising:

(d) a pair of amplification primers for amplifying the target nucleic-acid polymer, the two amplification primers bracketing the predetermined target position in the target polymer, at least one of the amplification primers comprising an attachment moiety for immobilizing target nucleic-acid polymer molecules on a solid support.

106. (previously presented) A reagent kit according to claim 105 further comprising:

(e) a solid support.

107. (previously presented) A reagent kit for detecting the presence or absence of one or more specific nucleotides at a predetermined target position in a target nucleic-acid polymer, comprising:

(a) a detection primer comprising a detection-primer nucleotide sequence having a primer-extension-initiation 3'-end nucleotide which constitutes a 3' terminal end of the detection primer, the detection-primer nucleotide sequence being complementary to a primer-hybridizing nucleotide sequence of the target nucleic-acid polymer with a nucleotide in the target nucleic-acid polymer complementary to the primer-extension-initiation 3'-end nucleotide of the detection-primer nucleotide sequence defining a primer-end complement nucleotide, the primer-hybridizing nucleotide sequence of the target nucleic-acid polymer extending towards the 3' end of the target polymer from the primer-end complement nucleotide, the primer-end complement nucleotide being located in the target polymer at a position 3'-ward of the predetermined target position, the position of the primer-end complement nucleotide being subject to a constraint that no nucleotide of the same type as the one or more specific nucleotides to be detected be located in the target polymer in any position between the position of the primer-end complement nucleotide and the predetermined target position;

(b) an enzymatic polymerizing agent; and

(c) an admixture of nucleoside triphosphates including at least one deoxynucleotide and at least one chain-terminating nucleotide analogue, at least one chain-terminating nucleotide analogue comprising a detectable label or an attachment moiety capable of binding a detectable label, each deoxynucleotide of the admixture of nucleoside

triphosphates being complementary to a nucleotide which differs from any nucleotide to which a chain-terminating nucleotide analogue of the admixture is complementary; so that in use the detection primer can hybridize to the target nucleic-acid polymer at the primer-hybridizing nucleotide sequence and form a detection-primer extension product by an enzyme-catalyzed primer-extension reaction to permit the presence or absence of a specific nucleotide at the predetermined target position to be detected by detecting the presence or absence of a corresponding detectable label in association with the detection-primer extension product.

108. (previously presented) A reagent kit according to claim 107 wherein the detection primer comprises an attachment moiety.

109. (previously presented) A reagent kit according to claim 107 wherein the detection-primer nucleotide sequence is from 10 to 40 nucleotides in length.

110. (previously presented) A reagent kit according to claim 107 wherein each chain-terminating nucleotide analogue of the nucleoside triphosphates of paragraph (c) is a dideoxyribonucleotide selected from the group consisting of ddATP, ddGTP, ddCTP, and ddTTP.

111. (previously presented) A reagent kit according to claim 110 in which at least one dideoxyribonucleotide of the nucleoside triphosphates of paragraph (c) comprises a detectable label consisting of a fluorescent group.

112. (previously presented) A reagent kit according to claim 107 wherein the nucleoside triphosphates of paragraph (c) include at least two deoxynucleotides.

113. (previously presented) A reagent kit according to claim 107 wherein each deoxynucleotide of the nucleoside triphosphates of paragraph (c) is a deoxyribonucleoside triphosphate selected from the group consisting of dATP, dGTP, dCTP, dUTP, and dTTP.

114. (previously presented) A reagent kit according to claim 107 in which the primer-end complement nucleotide is located in the target nucleic-acid polymer at a position immediately adjacent to the predetermined target position.

115. (previously presented) A reagent kit according to claim 107 further comprising:

(d) a pair of amplification primers for amplifying the target nucleic-acid polymer, the two amplification primers bracketing the predetermined target position in the target polymer, at least one of the amplification primers comprising an attachment moiety for immobilizing target nucleic-acid polymer molecules on a solid support.

116. (previously presented) A reagent kit according to claim 115 further comprising:

(e) a solid support.

117. (new) A reagent kit according to claim 97 in which the primer-end complement nucleotide is located in the target nucleic-acid polymer at a position spaced a plurality of nucleotides away from the predetermined target position.

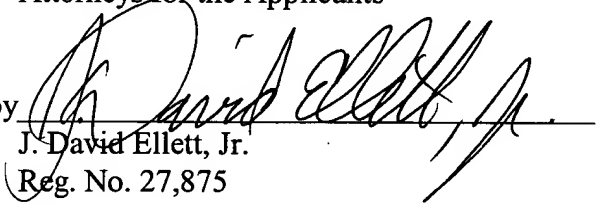
118. (new) A reagent kit according to claim 107 in which the primer-end complement nucleotide is located in the target nucleic-acid polymer at a position spaced a plurality of nucleotides away from the predetermined target position.

Conclusion

No fee is believed due for submitting the present reply to a notice of non-compliant amendment at the present time. If any fee is required, authorization is hereby given to charge the amount of such required fee to deposit account No. 11-0171. Entry of the reply to a final office action of 11 March 2004 in a form deemed compliant with 37 CFR 1.121 is earnestly solicited.

Respectfully submitted,

Attorneys for the Applicants

by 

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